

Rash of earthquakes prompts fear of oil boom in Balmorhea

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Photo: Texas Park And Wildlife

IMAGE 1 OF 16

The damage to the pool at the Balmorhea State park was documented by the Texas Parks and Wildlife staff.

BALMORHEA — When a section of concrete wall recently collapsed at one of the world's

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boom, some feared drilling, fracking or seismic activity related to high-pressure disposal wells had caused the pool failure.

“A lot of people jumped to those conclusions, but as far as we know, it has nothing to do with the oil boom or earthquakes,” said Mark Lockwood, regional West Texas parks director for the Texas Parks and Wildlife Department.

Instead, he said, engineers suspect more mundane forces might have undermined the wall.

“The area where we had the problem is under the high dive, near the main exit spot for the water. We end up with a lot of swirling water that erodes the side of the pool,” he said.

Repairs are expected to take months, he said, and until then, the 80-year-old pool, which in the summer draws thousands of guests a week from as far away as Europe, will remain closed. Large flashing road signs now warn arriving tourists of the closure.

Houston-based Apache Corp. shook up the Permian Basin two years ago by announcing its discovery of the Alpine High field in southwestern Reeves County.

The play may yield 3 billion barrels of oil and 75 trillion cubic feet of natural gas, likely making it the largest new field in the nation’s hottest oil play.

Over the next 30 years, the company says, it plans to drill about 5,000 wells in an unspoiled region that not only includes freshwater springs but is near the Davis Mountains and the

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McDonald Observatory. Drilling won't extend to Jeff Davis County, where the observatory is located.

The announcement brought anxiety and uncertainty in Balmorhea, an oasis of emerald-green irrigated fields in an otherwise drab and dusty corner of Texas, about 360 miles from San Antonio.

A charming and quaint town of about 600 people best known for its speedy six-man football teams and the fabulous swimming pool, Balmorhea had changed little over the decades before the oil play.

News of the enormous energy find also brought stark warnings from environmentalists about the potential danger to the San Solomon Springs, which feed the Balmorhea pool.

If things go wrong, they said, the flows easily could disappear, as had the once abundant Comanche Springs in Fort Stockton that went dry from over-pumping in the 1960s.

Apache already has drilled about 145 wells in the field, with about half in production. To date, most of them are natural gas wells, with drilling focused on oil to come later, company spokeswoman Castlen Kennedy said.

Late last year, seismic monitors were installed in the area. At least four scientific studies also are underway, including two underwritten by Apache. They are focused on everything from earthquake activity to water quality to the still unclear source and hydrology of the famous springs.

There also are 90 active disposal wells in Reeves County, according to the Texas Railroad Commission, which in 2014 imposed new rules limiting injections in areas of high seismicity.

The increase in disposal wells tracks a big uptick in seismic activity in the county, where moderately strong earthquakes now are a weekly occurrence.

Kennedy said Apache Corp. does not use deep injection wells to dispose of waste in the Alpine High area. Other companies operate disposal wells in Reeves County.

Neta Rhyne, 65, who owns a dive shop near the pool that's temporarily idle, is one of the oil boom's few outspoken critics.

"It's quiet now, but it's deceiving. They are quietly destroying everything. Balmorhea is just a little island surrounded by all this activity," she said.

Rhyne fears a strong quake near Balmorhea could permanently disrupt the underground springflows.

"I have been attending hearings at the Texas Railroad Commission on the disposal wells since 2016. I have protested over 45 and about 15 have pulled their applications," she said.

Quakes common to north

To see the future, Rhyne says, one need only look 35 miles north to Pecos, where drilling activity has been intense for several years, and where numerous injection wells are located.

Although only a few tremors have been felt so far in Balmorhea, in Pecos earthquakes are now commonplace, said Joel Chavez, 25, a middle school science teacher there.

In late 2016, he became intrigued with the tremors after he was shaken in his bed. He soon persuaded the University of Texas at Austin's Bureau of Economic Geology to install a seismic monitor outside Crockett Middle School where he teaches.

There now are 23 monitors in West Texas, including one near Balmorhea State Park, all part of the TexNet system.

The monitors in Reeves County have recorded hundreds of earthquakes already this year. While most can't be felt on the surface, in Pecos there are plenty of stronger ones, Chavez said.

"We feel the sensation. They are pretty often, about once a week, and those are pretty noticeable. People start posting on social media," he said, adding that some of the quakes also generate a loud noise.

"It definitely contributes to a worsening of our quality of life, along with other things like air

quality and water quality, that still need investigating,” said Chavez, who has little doubt they are tied to the deep injection wells.

A monitoring device installed near the Balmorhea park in September 2017 already has recorded two “clusters” of moderately strong earthquakes, both south of town, the Bureau of Economic Geology reports.

“We have a plan to start correlating information between deep wells and seismicity to see if there is any correlation, but so far it’s not established,” said Dr. Alexandros Savvaidis, manager of the TexNet project.

An ongoing study of water quality, underwritten by Apache, thus far has revealed no signs of contamination in either the springflows or well water used for drinking in the Balmorhea area, said Zacariah Hildenbrand, a biochemist at the University of Texas at Arlington.

“We’re in the second year of this study. It’s a sensitive ecology and everyone is looking very closely at what is going on in West Texas,” he said.

He said the partnership with Apache has been exemplary, with the company going so far as to share proprietary information on fracking compounds so they can be studied in experiments.

“We’re basically screening these water samples for almost 3,000 different variables, including about 2,500 microbial species, which can be a harbinger of contamination, as well as hundreds of chemical compounds, and a myriad of metals,” he said.

So far, he added, “nothing of note,” has been detected in samples taken and tested from about 20 sites around Balmorhea. A report likely will be published next year.

Citing the various air, water and soil studies done earlier, as well as ongoing monitoring programs, Kennedy reaffirmed the company’s commitment to responsible development.

“Apache continually works to ensure our development of Alpine High is setting the highest standards for safety and environmental stewardship,” she said by email.

Oil patch jobs

Today, almost two years since the first wells were drilled and flared around here, Balmorhea seems largely unchanged to visitors, and much of the initial anxiety has abated.

Paul Matta, 49, an early skeptic of the boom, acknowledged many of his fears have not been realized.

“I pictured dozens of wells around town. Flares all over the place, but that has not materialized, and I’m happy for that,” he said.

“But the story isn’t over yet. I don’t know what’s coming if the price of oil goes up. The thing I feared most is them drilling near our drinking water (wells) and the pool, or west of it,” he added.

Although there is a frenzy of oil field activity beyond Interstate 10 to the north, very little is yet visible around town. And while restaurants are more crowded, the oil field traffic in town is still light.

On hot summer days, carefree children frolic — just as their parents once did — in the springwater that flows through town under giant cottonwoods. In the cool of the evening, the older folks visit at the picnic tables beside the stream.

About the only sign of the oil boom in town are the white RVs now tucked into almost every vacant lot, housing oil-field workers who rarely are seen in daylight hours.

“We now have 11 RV parks in this little bitty town. That’s mine right over there,” said Phil Brijalba, 69, a city councilman, indicating four RV units in a lot on San Antonio Street.

Almost all the local young men are working in the oil patch, he said, some making \$25 an hour to start. That’s as much as he ever was paid in a 35-year career with the electric company.

The public’s worries about contamination of drinking water and damage to the springs generally have receded, he said.

“It worries me some, but everything around here us is private property. We have no control. It’s poor ranch country. If there is oil, they will go for it,” he said of landowners.

And so far, he said, Apache has been generous to the community, donating trees, \$150,000 to the school and a new truck to the Fire Department.

Reeves County Justice of the Peace Rosendo Carrasco, 73, born and raised here, said the boom has brought him only a few more speeding tickets and DWIs.

“There are a few people who are fearful of the springs drying out, but most people are happy. Anyone who has a business or a restaurant in Balmorhea is happy,” he said.

If the springs were to fail, he said, it would “put a big hurt on Balmorhea.”

“It would hurt the farmers who irrigate, and the pool feeds the lake, and we have a lot of people who come swimming,” he said.

Joel Madrid, 58, owns a restaurant and motel in town, and is also renting 50 RV slips to oilfield workers, with another 30 soon to come.

He said the boom already has more than doubled his business. He thinks it’s here to stay, and is investing in his properties.

“Let me tell you man, it’s just been awesome,” he said. “I think it’s gonna be here. So, I’m adding on. Jump on it, while it’s here.”

The ‘hidden gem’

Back at the state park, the only visitors last week at the closed pool was a Texas Parks and Wildlife Department team of scientists.

Armed with nets and kayaks, its members had come to capture Comanche Springs pupfish and the Pecos gambusia, both endangered species. The effort is part of a broad multiagency study of the springs.

“They are getting baseline data on the species that will be used to follow them through time,” Park Superintendent Carolyn Rose said of the fish catchers.

Parched travelers and townsfolk are waiting to jump back into the pristine waters.

“They used to say the park was a hidden gem in West Texas. Well it’s not hidden anymore,” Rose said. Last year, she noted, park officials were forced to impose a daily visitor cap to avoid overcrowding.

In the meantime, the black headwater catfish and silvery Mexican tetras will have the 3.5 million-gallon pool all to themselves.

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